AMENDMENTS TO THE CLAIMS:

Claim 1.   (Currently amended) A connection apparatus for a public network switching

system, the switching system having a first plurality of line ports to which a plurality of user

terminals are connected, a second plurality of line ports, a first plurality of trunk ports to

which a plurality of Internet lines are connected, and a second plurality of trunk ports, the

apparatus comprising:

a switching unit having a plurality of diverging ports adapted for connection to said

second plurality of trunk ports and a plurality of converging ports adapted for connection to

said second plurality of line ports; and

a control unit responsive to a request signal from one of said user terminals for

establishing in said switching unit a plurality of connections at least one connection specified

by said request signal between one of said diverging ports and a plurality at least one of said

converging ports,

wherein said public network switching system establishes a connection between said

one diverging port and said one user terminal and a plurality of connections at least one

connection between said second plurality of line ports and said first plurality of trunk ports

corresponding in number to said plurality of connections at least one connection established

in said switching unit.

Claim 2.   (Canceled).

Claim 3.   (Currently amended) The connection apparatus of claim 1, wherein at least one

each of said plurality of converging ports includes a multiplexer for multiplexing a plurality

of user signals into a signal for transmission to one of said Internet lines.

Claim 4.   (Currently amended) The connection apparatus of claim 3, wherein at least one

each of said plurality of converging ports further includes a demultiplexer for demultiplexing

a signal from said one Internet line into a plurality of signals for application to said diverging

ports.

Claim 5.   (Original) The connection apparatus of claim 3, wherein said multiplexer is

configured to operate in a TCP/IP protocol mode.

Claim 6.   (Original) The connection apparatus of claim 4, wherein said demultiplexer is

configured to operate in a TCP/IP protocol mode.

Claims 7 and 8.   (Canceled).

Claim 9.   (Previously presented) The connection apparatus of claim 3, wherein each of

said plurality of diverging ports includes a first line interface unit for interfacing the switching

unit to said switching system and each of said converging ports further includes a second line

interface unit for interfacing the multiplexer to said one Internet line.

Claim 10.   (Previously presented) The connection apparatus of claim 9, wherein said

second line interface unit is in compliance with the communication protocol and transmission

speed of one of said user terminals.

Claim 11.   (Previously presented) The connection apparatus of claim 9, wherein each of

said plurality of converging ports further includes a demultiplexer for demultiplexing a signal

from said one Internet line into a plurality of signals for application to said diverging ports

and wherein said second line interface unit is configured to interface the demultiplexer to said

one Internet line.

Claim 12.   (Currently amended) The connection apparatus of claim 1, wherein said

control unit comprises:

    a phone number memory for storing a plurality of phone numbers; and

    a processor for determining whether a phone number contained in said request signal

coincides with one of said phone numbers stored in said phone number memory and

establishing said plurality of connections at least one connection in said switching unit if the

phone number coincides with one of the stored phone numbers.

Claim 13.   (Currently amended) The connection apparatus of claim 12, wherein said

control unit further comprises an ID and password memory for storing a plurality of user

identifiers and user passwords, and wherein said processor is configured to:

    determine whether a user identifier and a user password contained in said request

signal coincide with one of the user identifiers and one of the user passwords stored in said ID

and password memory if the phone number contained in said request signal does not coincide

with any of the stored phone numbers, and

    establish said plurality of connections at least one connection in said switching unit if

the user identifier and the user password contained in the request signal coincide with one of

the stored user identifiers and one of the stored user passwords.

Claim 14.   (Currently amended) The connection apparatus of claim 13, wherein said

processor is configured to:

determine whether the phone number contained in said request signal coincides with a

phone number which is denied access to the Internet lines, and

establish said plurality of connections at least one connection in said switching unit if

the phone number contained in said request signal does not coincide with said phone number

which is denied access to the Internet lines.

Claim 15.   (Currently amended) A connection apparatus for a public network switching

system which serves user terminals via a plurality of ADSL (asymmetric digital subscriber

line) modems, said switching system having a first plurality of line ports to which said ADSL

modems are connected, a second plurality of line ports, a first plurality of trunk ports to

which a plurality of Internet lines are connected, and a second plurality of trunk ports, the

apparatus comprising:

a switching unit having a first plurality of diverging ports adapted for connection to

said second plurality of trunk ports, a second plurality of diverging ports adapted for

connection to said ADSL modems, and a plurality of converging ports adapted for connection

to said second plurality of line ports; and

a control unit responsive to a request signal from one of said ADSL modems for

establishing in said switching unit a first plurality of connections at least one first connection

between one of said first plurality of diverging ports and a plurality at least one of said

converging ports specified by said request signal and a second plurality of connections at least one second connection between one of said second plurality of diverging ports and a plurality said at least one of said converging ports,

wherein said public network switching system establishes a connection between said one ADSL modem and said one of said first plurality of diverging ports and a plurality of connections at least one connection between said second plurality of line ports and said first plurality of trunk ports corresponding to said first plurality of connections at least one first connection established in said switching unit.

Claim 16.   (Canceled).

Claim 17.   (Currently amended) A communication system comprising:

a public network switching system having a first plurality of line ports to which a plurality of user terminals are connected, and a first plurality of trunk ports to which a plurality of Internet lines are connected, and a second plurality of trunk ports;

a switching unit having a plurality of diverging ports connected to said second plurality of trunk ports and a plurality of converging ports connected to a second plurality of line ports; and

a control unit responsive to a request signal from one of said user terminals for establishing in said switching unit a plurality of connections at least one connection specified by said request signal between one of said diverging ports and a plurality at least one of said converging ports,

said public network switching system establishing a connection between said one

diverging port and said one user terminal, and a plurality of connections ~~at least one~~

~~connection~~ between said second plurality of line ports and said first plurality of trunk ports

corresponding to said plurality of connections ~~at least one connection~~ established in said

switching unit.

Claim 18.   (Canceled).

Claim 19.   (Currently amended) A communication system comprising:

a plurality of ADSL (asymmetric digital subscriber line) modems;

a public network switching system having a first plurality of line ports to which said

ADSL modems are connected, a second plurality of line ports, a first plurality of trunk ports

to which a plurality of Internet lines are connected, and a second plurality of trunk ports;

a switching unit having a first plurality of diverging ports connected to said second

plurality of trunk ports, a second plurality of diverging ports connected to said ADSL

modems, and a plurality of converging ports connected to said second plurality of line ports;

and

a control unit responsive to a request signal from one of said ADSL modems for

establishing in said switching unit a first plurality of connections ~~at least one first connection~~

between one of said first plurality of diverging ports and a plurality ~~at least one~~ of said

converging ports specified by said request signal and a second plurality of connections ~~at least~~

~~one second connection~~ between one of said second plurality of diverging ports and a plurality

~~said at least one of said number~~ of said converging ports,

said public network switching system establishing a connection between said one

ADSL modem and said one of said first plurality of diverging ports and a plurality of

connections at least one connection between said second plurality of line ports and said first

plurality of trunk ports corresponding to said first plurality of connections at least one first

connection established in said switching unit.

Claim 20.   (Canceled).

Claim 21.   (Currently amended) A method of communication for a public network

switching system by using a switching unit, said public network switching system having a

first and second plurality of line ports, and a first and second plurality of trunk ports, and said

switching unit having a plurality of diverging ports and a plurality of converging ports,

wherein a plurality of user terminals are connected to said first plurality of line ports and a

plurality of Internet lines connected to said first plurality of trunk ports, the method

comprising:

        connecting said plurality of diverging ports to said second plurality of trunk ports;

        connecting said plurality of converging ports to said second plurality of line ports;

        receiving a request signal from one of said user terminals via one of said first plurality

of line ports;

        establishing, in said public network switching system, a connection between said one

of said first plurality of line ports and one of said second plurality of trunk ports and a

plurality of connections at least one connection specified by said request signal between said

second plurality of line ports and said first plurality of trunk ports; and

        establishing, in said switching unit, a plurality of connections at least one connection

between one of said diverging ports and a plurality ~~at least one~~ of said converging ports

corresponding to plurality of connections ~~said at least one connection~~ established in said

public network switching system, said one of said diverging ports being connected to said one

of said second plurality of trunk ports.

Claim 22.   (Currently amended) The apparatus of claim 1, wherein the control unit

establishes a plurality ~~number~~ of connections in said switching unit between one of said

diverging ports in communication with said user terminal and a plurality ~~number~~ of

converging ports.

Claim 23.   (Currently amended) The apparatus of claim 22, wherein the number of said

plurality of connections in said switching unit is based upon a number of Internet lines

specified by said request signal.

Claim 24.   (Currently amended) A control unit for a public network switching system, the

switching system having a first plurality of line ports to which a plurality of user terminals are

connected, a second plurality of line ports, a first plurality of trunk ports to which a plurality

of Internet lines are connected, and a second plurality of trunk ports and having a switching

unit having a plurality of diverging ports adapted for connection to said second plurality of

trunk ports and a plurality of converging ports adapted for connection to said second plurality

of line ports, the control unit comprising:

      a phone number memory for storing a plurality of phone numbers; and

      a processor for determining whether a phone number contained in a request signal

coincides with one of said phone numbers stored in said phone number memory and

establishing <u>a plurality of connections between at least one diverging port and a plurality of</u>

<u>converging ports</u> ~~at least one connection~~ in a switching unit if the phone number coincides

with one of the stored phone numbers,

wherein the public network switching system establishes a connection between said <u>at</u>

<u>least</u> one diverging port and ~~said~~ one <u>of said plurality of</u> user <u>terminals</u> ~~terminal~~ and <u>a</u>

<u>plurality of connections</u> ~~at least one connection~~ between said second plurality of line ports

and said first plurality of trunk ports corresponding in number to said <u>plurality of connections</u>

~~at least one connection~~ established in said switching unit.